

Serial No. 10/760,486

**LISTING OF CLAIMS:**

The following listing of claims replaces all previous versions and listings of claims in the present application.

1. (Canceled)

2. (Currently amended) The control device of LEDs of Claim 1,

wherein the pulse output means varies, of the pulse signal, the cycle and the corresponding duty ratio so that a luminance variation characteristic of the LEDs is approximated to a luminance variation characteristic of an electric bulb.

3. (Canceled)

4. (Currently amended) ~~The~~A control device of LEDs of ~~Claim 3~~, comprising:

driving means for driving LEDs; and

pulse output means for varying a cycle and a corresponding duty ratio of a pulse signal outputted to the driving means to control the driving means,

wherein the pulse output means includes lighting-up means that gradually increases the cycle and the corresponding duty ratio of the pulse signal during a lighting-up period of the LEDs beginning at a start of a lighting-up of the LEDs,

wherein the lighting-up period includes a plurality of cycles, wherein the cycles serially take place and wherein each of the cycles is corresponded to by a duty ratio,

Serial No. 10/760,486

wherein the lighting-up means includes:

given cycle set means for setting a cycle of the pulse signal;

given duty ratio set means for setting a duty ratio of the pulse signal; and

given update means,

wherein, during the lighting-up period of the LEDs since the lighting-up of the LEDs starts, the given update means outputs, within a cycle set by the given cycle set means, a pulse signal having a time width relative to a corresponding duty ratio set by the given duty ratio set means, and

wherein, when a cycle elapses, the given update means instructs the given cycle set means to set a cycle taking place subsequently to the elapsed cycle by increasing the elapsed cycle and instructs the given duty ratio set means to set a duty ratio corresponding to the cycle taking place subsequently to the elapsed cycle by increasing the duty ratio corresponding to the elapsed cycle.

5. (Canceled)

6. (Currently amended) ~~The~~ A control device of LEDs of Claim 5, comprising:

driving means for driving LEDs; and

pulse output means for varying a cycle and a corresponding duty ratio of a pulse signal outputted to the driving means to control the driving means.

Serial No. 10/760,486

wherein the pulse output means includes lighting-out means that gradually decreases the cycle and the corresponding duty ratio of the pulse signal during a lighting-out period of the LEDs beginning from a start of a lighting-out of the LEDs.

wherein the lighting-out period includes a plurality of cycles, wherein the cycles serially take place and wherein each of the cycles is corresponded to by a duty ratio,

wherein the lighting-out means includes:

certain cycle set means for setting a cycle of the pulse signal;

certain duty ratio set means for setting a duty ratio of the pulse signal; and

certain update means,

wherein, during the lighting-out period of the LEDs since the lighting-out of the LEDs starts, the certain update means outputs, within a cycle set by the certain cycle set means, a pulse signal having a time width relative to a corresponding duty ratio set by the certain duty ratio set means, and

wherein, when a cycle elapses, the certain update means instructs the certain cycle set means to set a cycle taking place subsequently to the elapsed cycle by decreasing the elapsed cycle and instructs the certain duty ratio set means to set a duty ratio corresponding to the cycle taking place subsequently to the elapsed cycle by decreasing the duty ratio corresponding to the elapsed cycle.

7. (Canceled)

Serial No. 10/760,486

8. (Currently amended) The A control device of LEDs of Claim 7 used in a turning signal lamp of a vehicle, comprising:

driving means that drives the LEDs;

lighting-up means that gradually increases the cycle and the corresponding duty ratio of the pulse signal during a lighting-up period of the LEDs beginning from the start of a lighting-up of the LEDs; and

lighting-out means that gradually decreases the cycle and the corresponding duty ratio of the pulse signal during a lighting-out period of the LEDs beginning from the start of a lighting-out of the LEDs,

wherein a lamp signal is generated when a switch of the turning signal lamp is operated,

wherein, when the lamp signal indicative of the lighting-up of the LEDs is generated, the lighting-up of the LEDs starts,

wherein, when the lamp signal indicative of the lighting-out of the LEDs is generated, the lighting-out of the LEDs starts,

wherein the lighting-up period includes a plurality of cycles, wherein the cycles serially take place and wherein each of the cycles is corresponded to by a duty ratio,

wherein the lighting-up means includes:

given cycle set means for setting a cycle of the pulse signal;

given duty ratio set means for setting a duty ratio of the pulse signal; and

given update means,

Serial No. 10/760,486

wherein, during the lighting-up period of the LEDs since the lighting-up of the LEDs starts, the given update means outputs, within a cycle set by the given cycle set means, a pulse signal having a time width relative to a corresponding duty ratio set by the given duty ratio set means, and

wherein, when a cycle elapses, the given update means instructs the given cycle set means to set a cycle taking place subsequently to the elapsed cycle by increasing the elapsed cycle and instructs the given duty ratio set means to set a duty ratio corresponding to the cycle taking place subsequently to the elapsed cycle by increasing the duty ratio corresponding to the elapsed cycle.

9. (Currently amended) The A control device of LEDs of Claim 7 used in a turning signal lamp of a vehicle, comprising:

driving means that drives LEDs;

lighting-up means that gradually increases the cycle and the corresponding duty ratio of the pulse signal during a lighting-up period of the LEDs beginning from the start of a lighting-up of the LEDs; and

lighting-out means that gradually decreases the cycle and the corresponding duty ratio of the pulse signal during a lighting-out period of the LEDs beginning from the start of a lighting-out of the LEDs.

wherein a lamp signal is generated when a switch of the turning signal lamp is operated.

wherein, when the lamp signal indicative of the lighting-up of the LEDs is generated, the lighting-up of the LEDs starts.

Serial No. 10/760,486

wherein, when the lamp signal indicative of the lighting-out of the LEDs is generated, the lighting-out of the LEDs starts,

wherein the lighting-out period includes a plurality of cycles, wherein the cycles serially take place and wherein each of the cycles is corresponded to by a duty ratio,

wherein the lighting-out means includes:

certain cycle set means for setting a cycle of the pulse signal;

certain duty ratio set means for setting a duty ratio of the pulse signal; and

certain update means,

wherein, during the lighting-out period of the LEDs since the lighting-out of the LEDs starts, the certain update means outputs, within a cycle set by the certain cycle set means, a pulse signal having a time width relative to a corresponding duty ratio set by the certain duty ratio set means, and

wherein, when a cycle elapses, the certain update means instructs the certain cycle set means to set a cycle taking place subsequently to the elapsed cycle by decreasing the elapsed cycle and instructs the certain duty ratio set means to set a duty ratio corresponding to the cycle taking place subsequently to the elapsed cycle by decreasing the duty ratio corresponding to the elapsed cycle.